Paper No. 36

UNITED STATES PATENT AND TRADEMARK OFFICE

_____

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

_____

Ex parte PETER A. STARK,
AUDREY A. SHERMAN and ALBERT I. EVERAERTS

_____

Appeal No. 2002-2317
Application No. 09/025,607

_____

ON BRIEF

_____

Before PAK, OWENS, and MOORE, *Administrative Patent Judges*
OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal is from the final rejection of claims 1-4, 7-10, 12-22, 24, 25, 28, 29, 45-49 and 52. Claims 5 and 6, the only other claims pending as of the final rejection, stand objected to as being dependent from a rejected base claim but allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 25 and 49 were

canceled after the final rejection (amendment filed September 9, 2002, paper no. 33). The examiner stated in the final rejection (mailed December 17, 2001, paper no. 28, page 4) that if claim 52 were placed in statutory form it would be withdrawn from consideration. For this reason and because the statement of the rejections in both the appellants' brief (page 9) and the examiner's answer (page 3) do not include claim 52, we do not consider this claim to be on appeal. Thus, the claims before us are claims 1-4, 7-10, 12-22, 24, 28, 29, and 45-48.

THE INVENTION

The appellants claim a hot-melt pressure-sensitive adhesive composition and methods for making hot-melt adhesive compositions. Claims 1, 45 and 47 are illustrative:

> 1. A hot-melt pressure-sensitive adhesive composition, comprising a blend of:
>
> an acidic copolymer derived from a first group of monomers comprising at least one acidic monomer; and
>
> a basic copolymer derived from a second group of monomers comprising at least one basic monomer,
>
> wherein at least one of the first and second group of monomers comprises greater than 25% by weight of acidic or basic monomers, respectively, and
>
> wherein one of the acidic copolymer and the basic copolymer comprises up to about 5% by weight of the blend.

45. A method for improving cohesive strength of a hot-melt adhesive comprising the steps of:

providing a basic hot-melt adhesive derived from at least one basic monomer; and

blending a minor portion of an acidic copolymer with the hot-melt adhesive,

wherein the acidic copolymer is derived from monomers comprising greater than 25% by weight of acidic monomers.

47. A method for improving cohesive strength of a hot-melt adhesive comprises the steps of:

providing an acidic hot-melt adhesive; and

blending a basic copolymer with the hot-melt adhesive,

wherein the basic copolymer is derived from monomers comprising greater than 25% by weight of basic monomers.

THE REFERENCES

Uraneck	2,921,043	Jan. 12, 1960
Murdock et al. (Murdock)	3,236,914	Feb. 22, 1966
Muehlenbernd et al. (EP '082)[1] (European patent application)	EP 0 578 082 A2	Dec. 01, 1994

[1] Citations herein to EP '082 are to the English translation thereof which is of record.

THE REJECTIONS

The claims stand rejected as follows: claims 1-4, 7-10, 12-22, 24, 28, 29, 45 and 47 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103 as obvious over Murdock, and claims 1-4, 7-10, 12-22, 24, 28, 29 and 45-48 under 35 U.S.C. § 103 as obvious over Uraneck or EP '082.

OPINION

We reverse the rejections over Murdock, reverse the rejection over Uraneck, reverse the rejection of claims 1-4, 7-10, 12-22, 24, 28 and 29 over EP '082, and affirm the rejection of claims 45-48 over EP '082.

Rejections over Murdock

Claims 1-4, 7-10, 12-22, 24, 28, 29

We need to address only claim 1. Claims 2-4, 7-10, 12-22 and 24 depend directly or indirectly from claim 1, and claims 28 and 29 claim articles having a substrate coated with the composition of claim 1.[2]

Murdock discloses a composition comprising a blend of an acidic copolymer derived from a first group of monomers

[2] For this reason we need to address only claim 1 in our discussion of the rejections of claims 1-4, 7-10, 12-22, 24, 28, 29 over Uraneck and over EP '082.

comprising at least one acidic monomer, and a basic copolymer derived from a second group of monomers comprising at least one basic monomer (col. 2, lines 28-35; col. 2, line 42 - col. 3, line 7). Murdock teaches that "neutral" monomers may optionally be included when making the acidic copolymer and the basic copolymer (col. 3, lines 8-12). This teaching indicates that the acidic copolymer and the basic copolymer can be made in the absence of such neutral monomers, i.e., can be made using, respectively, solely acidic monomers and basic monomers. The acidic copolymer and the basic copolymer can be blended in any proportion such as 1:99 to 99:1 (col. 4, lines 49-52). The disclosed use of the composition is for making high impact molding resins having improved thermal stability (col. 2, lines 36-41; col. 4, lines 56-60; col. 5, lines 20-24 and 39-42).

The preamble of the appellants' claim 1 recites that what is claimed is "[a] hot-melt pressure-sensitive adhesive composition". The examiner argues: "Hot-melt adhesive is the intended use and as such it has no patentable significance. To misquote Gertrude Stein, 'a composition, is a composition, is a composition'" (answer, page 4).

A term appearing in a preamble is limiting when it is found to be required to confer meaning on the claim. *See Phillips Petroleum Co. v. Huntsman Polymers Corp.*, 157 F.3d 866, 872, 48 USPQ2d 1161, 1166 (Fed. Cir. 1998). "If the claim preamble, when read in the context of the entire claim, recites limitations of the claim, or, if the claim preamble is 'necessary to give life, meaning, and vitality' to the claim, then the claim preamble should be construed as if in the balance of the claim." *Pitney Bowes Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165 (Fed. Cir. 1999) (quoting *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 480-81 (CCPA 1951). That is, "the preamble may be limiting 'when the claim drafter chooses to use both the preamble and the body to define the subject matter of the claimed invention.'" *Allen Engineering Corp. v. Bartell Industries Inc.*, 299 F.3d 1336, 1346, 63 USPQ2d 1769, 1774 (Fed. Cir. 2002) (quoting *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d 615, 620, 34 USPQ2d 1816, 1820 (Fed. Cir. 1995). "If, however, the body of the claim fully and intrinsically sets forth the complete invention, including

all of its limitations, and the preamble offers no distinct definition of any of the claimed invention's limitations, but rather merely states, for example, the purpose or intended use of the invention, then the preamble is of no significance to claim construction because it cannot be said to constitute or explain a claim limitation." *Pitney Bowes,* 182 F.3d at 1305, 51 USPQ2d at 1166. "The effect preamble language should be given can be resolved only on review of the entirety of the patent to gain an understanding of what the inventors actually invented and intended to encompass by the claim." *Corning Glass Works v. Sumitomo Electric*, 868 F.2d 1251, 1257, 9 USPQ2d 1962, 1966 (Fed. Cir. 1989). In *Corning Glass*, the preamble was: "An optical waveguide". *Corning Glass*, 868 F.2d at 1256, 9 USPQ2d at 1965. The court stated that "contrary to Sumitomo's argument, the core and cladding limitations specifically set out in paragraphs (a) and (b) are not the only limitations of the claim. [citation omitted] The claim requires, in addition, the particular structural relationship defined in the specification for the core and cladding to function as an optical waveguide." *Corning Glass*, 868 F.2d at 1257, 9 USPQ2d at 1966.

The appellants' specification states:

> The present invention relates to hot-melt adhesive compositions. In particular, hot-melt adhesive blends and methods for their preparation and use are taught by the present invention. [page 1, lines 8-10]
>
> * * *
>
> Hot-melt adhesives of the present invention comprise a blend of at least one acidic polymer and at least one basic polymer. Preferably, at least one of the acidic polymer and the basic polymer is a hot-melt adhesive (i.e., having properties of a hot-melt adhesive). The following description of such hot-melt adhesive blends and their use will make reference to terms which are hereinafter defined as follows:
>
> "Pressure-sensitive adhesives (PSAs)" are well known to one of ordinary skill in the art to possess properties including the following: (1) aggressive and permanent tack, (2) adherence with no more than finger pressure, (3) sufficient ability to hold onto an adherend, and (4) sufficient cohesive strength to be removed cleanly from the adherend. PSAs are one example of a preferred hot-melt adhesive blend in accordance with the present invention.
>
> "Heat-activatable adhesive systems" are another preferred hot-melt adhesive blend in accordance with the present invention. Heat-activatable adhesives are substantially nontacky at room temperature, but become tacky upon heating. Heat-activatable systems, unlike PSA systems, rely on a combination of pressure and heat to bond to a surface. [page 9, lines 13-28]

Thus, the appellants' specification teaches that the invention is not merely an composition comprising the disclosed components but, rather, is a hot-melt adhesive composition. Moreover, the statement in the specification that pressure-sensitive adhesives

are one type of hot-melt adhesive indicates that the preamble of claim 1 limits the claimed invention not only to a hot-melt adhesive composition but, rather, to a hot-melt adhesive composition having pressure-sensitive adhesive properties. Consequently, the preamble of claim 1 gives life, meaning and vitality to the claim and, therefore, is to be construed as if in the balance of the claim.

Hence, the examiner's argument that "hot-melt pressure-sensitive adhesive composition" in the preamble of claim 1 merely sets forth an intended use of the blend recited in the body of the claim is incorrect.

The examiner has not pointed out where Murdock discloses a hot-melt pressure-sensitive adhesive composition, or explained how Murdock would have fairly suggested such a composition to one of ordinary skill in the art. Consequently, the examiner has not carried the burden of establishing a *prima facie* case of anticipation or obviousness of the invention claimed in the appellants' claim 1 over Murdock. Accordingly, we reverse the rejections of claims 1-4, 7-10, 12-22, 24, 28 and 29 under 35 U.S.C. §§ 102(b) and 103 over Murdock.

Claims 45 and 47

One of the components used in the method of claim 45 is a basic hot-melt adhesive, and one of the components used in the method of claim 47 is an acidic hot-melt adhesive. The examiner has not pointed out where Murdock discloses such hot-melt adhesives, or explained how Murdock would have fairly suggested them to one of ordinary skill in the art.

The examiner, therefore, has not carried the burden of establishing a *prima facie* case of anticipation or obviousness of the methods claimed in the appellants' claims 45 and 47 over Murdock. We therefore reverse the rejections of these claims under 35 U.S.C. §§ 102(b) and 103.

Rejection over Uraneck

Claims 1-4, 7-10, 12-22, 24, 28 and 29

Uraneck discloses an intermolecular neutralization product of acidic and basic polymers or copolymers which can be used in products including adhesives, coating compositions, molding and casting compositions, tire stock, specialty rubbers, wire insulation and films (col. 1, lines 15-18; col. 2, lines 53-56; col. 3, lines 56-59; col. 4, lines 56-59). The acidic monomer

and the basic monomer each can be used in an amount of 1 to 100 parts by weight per 100 parts of total monomeric material (col. 4, lines 29-32; col. 5, lines 59-62). Uraneck teaches that "[p]roperties of the compositions can be varied by varying the blending ratio as well as the types of polymers employed" (col. 2, lines 13-15) and that "[t]he polymers can range from liquids to elastomers to resinous materials depending upon the monomers chosen, ratio of monomers, amount and type of modifying agent, and polymerization conditions" (col. 4, lines 32-35).

The examiner argues that "[s]ince the intended uses include adhesives (column 2, line 56), this makes any ratio of the two copolymers obvious" (answer, page 4). As discussed above, however, Uraneck teaches that the properties of the product depend upon a number of factors other than the ratio of copolymers. The examiner has pointed to Uraneck's disclosure that the products of the invention can be used in adhesives, but has not explained how the reference would have led one of ordinary skill in the art to select a combination of variables needed to make a hot-melt pressure-sensitive adhesive. As discussed above regarding the rejections over Murdock, "hot-melt

pressure-sensitive adhesive composition" in the preamble of the appellants' claim 1 is a limitation of the claimed invention.

The examiner, therefore, has not carried the burden of establishing a *prima facie* case of obviousness of the invention claimed in the appellants' claim 1 over Uraneck. Accordingly, we reverse the rejection of claims 1-4, 7-10, 12-22, 24, 28 and 29 under 35 U.S.C. § 103 over Uraneck.

Claims 45-48

The appellants' claims 45 and 46 require the use of a basic hot-melt adhesive, and claims 47 and 48 require the use of an acidic hot melt adhesive.

The examiner does not address these limitations. Because the examiner has not pointed out where Uraneck discloses a basic or acidic hot-melt adhesive, or explained how Uraneck would have fairly suggested such a hot-melt adhesive to one of ordinary skill in the art, the examiner has not carried the burden of establishing a *prima facie* case of obviousness over Uraneck of the methods claimed in the appellants' claims 45-48. Consequently, we reverse the rejection of these claims over Uraneck.

Rejection over EP '082

Claims 1-4, 7-10, 12-22, 24, 28 and 29

EP '082 discloses a polymeric ammonium salt made by reacting 1) at least one ethylene copolymer or terpolymer (A) made from a group of monomers containing 0.5-50 wt% of at least one specified dicarboxylic acid or anhydride or ester thereof, and 2) at least one polyalkylene imine and/or polyvinyl amine (B), each having more than 3 amino groups in the molecule (pages 2 and 6). The amount of components (B) must be sufficient for neutralizing at least 5 mol% of the free carboxyl groups in component (A) (page 7).[3] The polymeric ammonium salt is suitable as a hot melt adhesive and for preparing foils, molded parts, light-sensitive recording elements, and cable jackets for medium and high voltage electric cables (page 3).

As discussed above regarding the rejections over Murdock, "hot-melt pressure-sensitive adhesive composition" in the preamble of the appellants' claim 1 is a limitation of the claimed invention. The examiner has provided no evidence or

[3] The original EP '082 document indicates that in the translation on page 7, in line 10 "component (A)" should be "component (B)", and in line 14 "component (B)" should be "component (A)".

technical reasoning which shows that any of the EP '082 hot melt adhesives is a pressure sensitive adhesive, or explained how EP '082 would have fairly suggested a hot melt pressure sensitive adhesive to one of ordinary skill in the art.

Hence, the examiner has not carried the burden of establishing a *prima facie* case of obviousness of the invention claimed in the appellants' claim 1 over EP '082. Accordingly, we reverse the rejections of claims 1-4, 7-10, 12-22, 24, 28 and 29 under 35 U.S.C. § 103 over EP '082.

Claims 45-48

The appellants state that claims 45 and 46 stand or fall together, as do claims 47 and 48 (brief, page 10). We therefore limit our discussion to the independent claim in each group, i.e., claims 45 and 47. *See In re Ochiai*, 71 F.3d 1565, 1566 n.2, 37 USPQ2d 1127, 1129 n.2 (Fed. Cir. 1995); 37 CFR § 1.192(c)(7)(1997).

Claim 45

EP '082 discloses a method for producing a hot-melt adhesive having excellent adhesion (page 8), comprising providing a basic polymer or copolymer, which reasonably appears to be a hot-melt

adhesive, derived from at least one basic monomer, and blending therewith an acidic copolymer or terpolymer derived from monomers comprising 0.5-50 wt% acidic monomers (pages 2 and 6-7).

The appellants argue, in reliance upon the EP '082 examples, that EP '082 does not disclose or suggest blending a minor amount of acidic copolymer with the basic polymer or copolymer (brief, page 19). The reference, however, is not limited to its examples. *See In re Fracalossi*, 681 F.2d 792, 794 n.1, 215 USPQ 569, 570 n.1 (CCPA 1982). EP '082 teaches that it is advantageous to use only enough basic component to neutralize all of the free carboxyl groups in the acidic component (page 7).[4] However, because EP '082 is not limited to this preferred embodiment, *see In re Kohler*, 475 F.2d 651, 653, 177 USPQ 399, 400 (CCPA 1973), and because the reference teaches that the acidic and basic components can be used in widely varying amounts (page 7), the reference would have fairly suggested, to one of ordinary skill in the art, use of a greater amount of basic component, with suitable amounts being determined through no more than routine experimentation. *See In re Aller*, 220 F.2d 454,

[4] EP '082 teaches that the amount of basic component must be sufficient to neutralize at least 5 mol% of the free carboxyl groups in the acidic component (page 7).

456, 105 USPQ 233, 235 (CCPA 1955). Thus, EP '082 would have fairly suggested the use of a minor amount of acidic copolymer to one of ordinary skill in the art.

Accordingly, we affirm the rejection of claims 45 and 46 over EP '082.

Claim 47

EP '082 discloses a method for producing a hot-melt adhesive having excellent adhesion (page 8), comprising providing an acidic copolymer or terpolymer, which reasonably appears to be a hot-melt adhesive, and blending therewith a basic polymer or copolymer, derived from 100% basic monomers, in an amount sufficient to neutralize at least 5 mol% of the free carboxyl groups in the acidic copolymer or terpolymer (pages 2 and 6-7).

The appellants argue that EP '082 does not teach or suggest general methods for improving the cohesive strength of acidic hot-melt adhesives (brief, page 20). This argument is not well taken because the particular method claimed in the appellants' claim 47 would have been fairly suggested to one of ordinary skill in the art by the EP '082 disclosure set forth in the preceding paragraph.

Hence, we affirm the rejection of claims 47 and 48 over EP '082.

DECISION

The rejections of claims 1-4, 7-10, 12-22, 24, 28, 29, 45 and 47 under 35 U.S.C. §§ 102(b) and 103 over Murdock, claims 1-4, 7-10, 12-22, 24, 28, 29 and 45-48 under 35 U.S.C. § 103 over Uraneck, and claims 1-4, 7-10, 12-22, 24, 28, 29 under 35 U.S.C. § 103 over EP '082 are reversed. The rejection of claims 45-48 under 35 U.S.C. § 103 over EP '082 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

CHUNG K. PAK Administrative Patent Judge	)	
TERRY J. OWENS Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JAMES T. MOORE Administrative Patent Judge	)	

tjo/vsh

Appeal No. 2002-2317
Application No. 09/025,607

3M INNOVATIVE PROPERTIES COMPANY
PO BOX 33427
ST. PAUL, MN 55133-3427